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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/731,297  | 12/09/2003  | Peiching Ling        | I0CC0301            | 3648             |
| 7590  | 04/16/2004  |                      | EXAMINER            |                  |
| Bo-In Lin<br>13445 Mandoli Drive<br>Los Altos, CA 94022 |             |                      | HEALY, BRIAN        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2874                |                  |

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |              |
|------------------------------|-----------------|--------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |
|                              | 10/731,297      | LING ET AL.  |
| Examiner                     | Art Unit        |              |
| Brian M. Healy               | 2874            |              |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1-45 and 91-101 is/are allowed.
- 6) Claim(s) 46 is/are rejected.
- 7) Claim(s) 47-90 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 December 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413)  
 Notice of Draftsperson's Patent Drawing Review (PTO-948)      Paper No(s)/Mail Date. \_\_\_\_\_.  
 Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

Brian M. Healy  
 Primary Examiner

Notice of Informal Patent Application (PTO-152)  
 Other: \_\_\_\_\_.

**ALLOWABLE SUBJECT MATTER**

Claims 1-45 and 91-101 are allowed over the prior art of record. The closest prior art of record, i.e. Gustavsson, U.S.P. No.6,374,019 is discussed below. Gustavsson does not teach or suggest the limitations including: a set of Bragg gratings disposed near a coupling region between first and second waveguides to reflect a reflecting optical signal back to the first waveguide and for transmitting a contra-directional optical signal and a co-directional optical signal having respectively a contra-directional selected wavelength corresponding to the Bragg gratings wherein one of the contra-directional and co-directional wavelengths is chosen as a designated wavelength and the reflecting optical signal and one of the contra-directional or co-directional optical signals are outside of a predefined range surrounding the designated wavelength. These limitations are recited in claims 1-45. Gustavsson 019' also does not teach or suggest a wavelength-selective optical transmission system including first and second vertically stacked optical waveguides of different propagation constants with a set of wavelength selective Bragg gratings between first and second optically waveguides, as is recited in claims 91-101.

Claims 47-90 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. See the dependent claims listed for allowable features including the chemical compounds listed for the first and second waveguides and the contra-directional and co-directional wavelengths and their relationship to the set of Bragg gratings (described above) and also including the mathematical relationship between the wavelengths chosen and the propagation constant. These limitations are described in claims 47-90.

**102 REJECTIONS**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 46 is rejected under 35 U.S.C. 102(b) as being anticipated by Gustavsson, U.S.P. No.6,374,019.

Gustavsson 019' teaches (Figs.1-2) a wavelength-selective optical transmission system comprising: a first waveguide 1 for transmitting a multiplexed optical signal therethrough and a second waveguide 2 coupled to the first waveguide and wherein at least the coupling region between the first and second waveguides including a set of wavelength selective Bragg gratings 10,20,30,40 located in a gap between the first and second waveguide and the first and second waveguides has different propagation constants which clearly, fully meets Applicant's claimed limitations.

Any inquiry concerning the merits of this communication should be directed to Examiner BRIAN M. HEALY Examiner at telephone number (571) 272-2347. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.

***BRIAN M. HEALY***  
***Primary Patent Examiner***  
***Group Art Unit 2874***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Fritz et. al., U.S.P. No.5,446,809 (Figs.1-8), Kewitsch et. al., U.S.P. No. 5,875,272 (Figs.1-10), Fatehi et. al., U.S.P. No.6,067,389 (Figs.1-4B), Augustsson, U.S.P. No.6,501,872 (Figs.1-5) and Kewitsch et. al., U.S.P. No.6,201,909 (Figs.1-18).

  
***Brian Healy***  
***Primary Examiner***